

REMARKS

It is noted that the Examiner's Final Rejection indicates that Claims 1 - 7 and 9 - 22 are rejected. However, Claims 14 - 22 have not been rejected and Applicants assume that these claims continue to stand withdrawn from consideration, as indicated in the Office Action of August 14, 2002.

It is proposed by this amendment that independent Claims 1 and 5 be amended to recite language indicating that the sloped vias "allow said interposer to flex both vertically and horizontally". Such recitation makes more clear the mechanical function of the sloped vias. Thus, the vias are arranged to function both mechanically and electrically. In addition, the amendment also defines the sloped vias as "similarly sloped". Okinaga's vias are each differently sloped.

In the Examiner's Response to Arguments, the Examiner states that "a prima facie case for obviousness is established by a showing of a reference that predates Applicants' invention and a motivation for the combination, which is established in the record".

Applicants do not agree that the record supports a motivation for the combination and, in fact, Applicants' ongoing arguments in the case have pointed out that, on the contrary, the references themselves teach away from them being combined. In this regard, it is Applicants' understanding that there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.

In addition to some suggestion or motivation to combine, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based upon Applicants' disclosure. Again, Applicants have, heretofore in the record, pointed out that not only is there no teaching or suggestion to combine references but that, indeed, the combinations proposed by the Examiner would not be operative as intended by any of the references and, in particular, by Fox, et al.

Again, to support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references. Ex part Clapp, 227 USPd972.

The Examiner asserts that "it would have been obvious to one of ordinary skill in the art to form sloped vias in the insulating material of Fox in order to reduce capacity and inductance as taught by Okinaga (English Abstract)" (emphasis added).

It is Applicants' understanding that Okinaga arranges the vias 2 in substrate 10 to reach pins 8 in the shortest distance to reduce capacity and inductance. Since the footprint of pins 8 is greater than the footprint of contacts 5 on semiconductor element 6, the shortest distance is obtained by forming the vias on a diagonal or sloped line with respect to the surfaces of substrate 10.

Fox, et al., on the other hand, already have their conductive vias 58 traversing the shortest distance through "the insulating material of Fox, et al.". To form sloped vias in Fox, et al., would not reduce capacity and inductance in Fox, et al., as suggested by the

Examiner, but would rather appear to increase the capacity and inductance of Fox, et al. Thus, there would clearly be no motivation to slope the vias of Fox, et al., and it would appear to be exactly what Fox, et al. would not want to do. It should be noted that the footprints on opposing surfaces of layer 52 of Fox, et al. appears to be the same and to slope the vias would alter the Fox, et al. design configuration.

Accordingly, Applicants do not believe the examiner has not made out a prima facie case of obviousness to which Applicants are required to shift the burden of proof. Applicants have specifically pointed out in previous arguments that, given the different teachings of Fox, et al. and Okinaga, there would be no reason or motivation for one skilled in the art to use the sloped vias of Okinaga in Fox, et al. (see page 9 of Applicants' Amendment of Jan. 23, 2003). The Examiner, on the other hand, has not countered these arguments with a line of reasoning to suggest why one skilled in the art would be so motivated other than the general assertion "in order to reduce capacity and inductance". How would such a step reduce capacity and inductance in Fox, et al.? And why would one skilled in the art want to do this in Fox, et al.? When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of teachings is proper. Ex parte Skinner, 2 USPQ2d 1788.


Applicants believe that the Examiner's Final Rejection is premature, given the lack of response to Applicants' prior arguments. Applicants have also proposed herewith to amend independent Claims 1 and 5 to further define Applicants' invention over the art relied upon by the Examiner.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the Final Rejection, enter the amendment as proposed, allow the claims as herein presented and pass the case to issue.

Respectfully submitted,

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